Early immune cells created from embryonic stem cells

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Researchers at UC, Los Angeles have created cells that go on to form normal T cells out of human embryonic stem cells. What's more, these cells were grown in the absence of animal feeder cells, which are usually needed to sustain embryonic stem cells. Avoiding potential contamination by such feeder cells is an important step in generating cells that can be transplanted into people. The researchers describe a series of steps that drive human embryonic stem cells to begin developing as T cells. When they transplanted the cells into mice with human thymus tissue, where T cells normally mature, those cells did mature into normal adult T cells. In addition, the group inserted genes into their immature T cells before transplantation and saw evidence that those genes were active in the mature, transplanted cells. This work brings researchers closer to creating cells that can be transplanted into people as a therapy for disorders of the immune system, including HIV/AIDS.

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Related Information: The Eli and Edythe Broad Center for Regenerative Medicine and Stem Cell Research at UCLA , Zack bio

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